What is claimed is:

1. A device for arraying cells associated with magnetic material in a cell-containing fluid comprising a substrate having a plurality of magnetic receptacles arrayed in a discrete pattern, an external magnetic field and a cell delivery device; wherein the magnetic receptacles comprise highly-magnetically-permeable material and a localized magnetic field gradient.

2. The device of claim 1 wherein the substrate and cell delivery device are fabricated from a material selected from the group consisting of glass, urethane, rubber, molded plastic, polymethylmethacrylate, polycarbonate, polytetrafluoroethylene, polyvinylchloride, polydimethylsiloxane, and polysulfone.

3. The device of claim 1 wherein the highly-magnetically-permeable material is in the form of filings.

4. The device of claim 1 wherein the highly-magnetically- permeable material is in the form of horns.

5. The device of claim 1 wherein the highly-magnetically-permeable material comprises nickel, cobalt, soft iron, silicon iron, gadolinium, or a combination thereof.

6. The device of claim 1 wherein the highly-magnetically-permeable material is positioned above, below or coplanar with the substrate.

7. The device of claim 1 wherein the localized magnetic field gradient has a strength capable of capturing about one to about five cells associated with magnetic material per magnetic receptacle.

8. The device of claim 1 wherein the external magnetic field is derived from at least one permanent magnet.

9. The device of claim 8 wherein the permanent magnet metal comprises neodymium iron boron.

10. The device of claim 1 wherein the external magnetic fields is derived from an electromagnet.

11. The device of claim 1 further comprising a layer placed on top of said substrate wherein said layer has micro-gaps positioned over said magnetic receptacles.

12. The device of claim 1 wherein the cell delivery device comprises a microfluidic interface having at least one channel having an inlet and outlet port.

13. The device of claim 12 having a plurality of channels.

14. The device of claim 12 wherein the at least one channel has a diameter of about 100μm.

15. The device of claim 1 wherein the cell delivery device comprises a cell panning device.

16. The device of claim 1 further comprising a cell isolation device comprising wells which are positioned over said magnetic receptacles.

17. The device of claim 16, wherein the wells of the cell isolation device have micro through-holes and micro through-hole walls.

18. The device of claim 17, wherein the micro through-holes comprise a semi-permeable membrane opposite the substrate, wherein the membrane restricts cell movement between wells and is permeable to fluid.

19. The device of claim 17 wherein the micro through-hole walls are canted or perpendicular to the substrate.

20. The device of claim 16 wherein the cell isolation device is mated to said substrate such that when the substrate is removed, the cells associated with magnetic material remain in the cell isolation device.

21. The device of claim 20, where the cells associated with magnetic material are transferred to the cell isolation device by centrifugal force.

22. The device of claim 1 wherein said discrete pattern matches the periodicity of a 96-well microtiter plate.

23. The device of claim 1 wherein said discrete pattern matches the periodicity of a 384-well microtiter plate.

24. The device of claim 1 wherein said discrete pattern matches the periodicity of a 1536-well microtiter plate.

25. The device of claim 1 wherein the substrate and the cell delivery device are coated with a hydrophobic agent.

26. The device of claim 25 wherein the hydorphobic agent is selected from the group consisting of teflon, perfluoronated plastic, polyethylene glycol, ethylene oxide-terminated trichlorosilane, and hydrophobic alkyltrichlorosilane.

27. The device of claim 1 wherein the substrate and the cell delivery device are coated with an anti-coagulant.

28. The device of claim 27 wherein the anti-coagulant is selected from the group consisting of heparin, heparin fragments, tissue-type plasminogen activator (tPA), urokinase (uPA), Hirudan, albumin, anti-platelet receptor GPIB antibodies, anti-platelet receptor GPIIb/IIIa antibodies, and anti-von Willebrand Factor (vWF) antibodies.

29. The device of claim 1, wherein the cells associated with magnetic material comprise magnetic beads.

30. The device of claim 1 wherein the cells associated with magnetic material comprise a bioaffinity ligand.

31. The device of claim 30 wherein the bioaffinity ligand is an antibody.

32. The device of claim 31 wherein the antibody is specific for syndecan.

33. The device of claim 1 wherein the cells associated with magnetic material are hybridoma cells.

34. The device of claim 16 wherein the cell isolation device is coated with a hydrophobic agent.

35. The device of claim 34 wherein the hydrophobic agent is selected from the group consisting of teflon, perfluoronated plastic, polyethylene glycol, ethylene oxide-terminated trichlorosilane, and hydrophobic alkyltrichlorosilane.

36. The device of claim 16 wherein the cell isolation device is coated with an anti-coagulant.

37. The device of claim 36 wherein the anti-coagulant is selected from the group consisting of heparin, heparin fragments, tissue-type plasminogen activator (tPA), urokinase (uPA), Hirudan, albumin, anti-platelet receptor GPIB antibodies, anti-platelet receptor GPIIb/IIIa antibodies, and anti-von Willebrand Factor (vWF) antibodies.

38. A device for arraying cells associated with magnetic material in a cell-containing fluid comprising a substrate having magnetic receptacles arrayed in a discrete pattern; wherein the magnetic receptacles comprise a permanent magnet and a localized magnetic field gradient.

39. The device of claim 38 wherein the substrate is fabricated from a material selected from the group consisting of glass, urethane, rubber, molded plastic, polymethylmethacrylate, polycarbonate, polytetrafluoroethylene, polyvinylchloride, polydimethylsiloxane, and polysulfone.

40. The device of claim 38 wherein the permanent magnet is in the form of filings.

41. The device of claim 38 wherein the permanent magnet is in the form of horns.

42. The device of claim 38 wherein the permanent magnet comprises a rare earth metal.

43. The device of claim 42 wherein the rare earth metal is neodymium.

44. The device of claim 38 wherein the permanent magnet is positioned above, below or coplanar with the substrate.

45. The device of claim 38 wherein the localized magnetic field gradient strength is capable of capturing between one to five cells associated with magnetic material per

said magnetic receptacle.

46. The device of claim 38 further comprising a layer placed on top of said substrate wherein said layer has micro-gaps positioned over said magnetic receptacles.

47. The device of claim 38 further comprising a cell delivery device comprising a fluidic interface having at least one channel having an inlet and outlet port.

48. The device of claim 47 having a plurality of channels.

49. The device of claim 47 wherein the at least one channel has a diameter of about 100μm.

50. The device of claim 38 further comprising a cell panning device.

51. The device of claim 38 further comprising a cell isolation device comprising wells which are positioned over said magnetic receptacles.

52. The device of claim 51, wherein the wells of the cell isolation device have micro through-holes and micro through-hole walls.

53. The device of claim 52, wherein the micro through-holes comprise a semi-permeable membrane opposite the substrate, wherein said membrane restricts cell movement between wells and is permeable to fluid.

54. The device of claim 52 wherein the micro through-hole walls are canted or perpendicular to the substrate.

55. The device of claim 52 wherein the cell isolation device is mated to said substrate such that when the substrate is removed, the cells associated with magnetic material remain in the cell isolation device.

56. The device of claim 55, where the cells associated with magnetic material are transferred to the cell isolation device by centrifugal force.

57. The device of claim 38 wherein said discrete pattern matches the periodicity of a 96-well microtiter plate.

58. The device of claim 38 wherein said discrete pattern matches the periodicity of a 384-well microtiter plate.

59. The device of claim 38 wherein said discrete pattern matches the periodicity of a 1536-well microtiter plate.

60. The device of claim 38 wherein the substrate and the cell delivery device are coated with a hydrophobic agent.

61. The device of claim 60 wherein the hydorphobic agent is selected from the group consisting of teflon, perfluoronated plastic, polyethylene glycol, ethylene oxide-terminated trichlorosilane, hydrophobic alkyltrichlorosilane.

62. The device of claim 38 wherein the substrate and the cell delivery device are coated with an anti-coagulant.

63. The device of claim 62 wherein the anti-coagulant is selected from the group consisting of heparin, heparin fragments, tissue-type plasminogen activator (tPA), urokinase (uPA), Hirudan, albumin, anti-platelet receptor GPIB antibodies, anti-platelet receptor GPIIb/IIIa antibodies, and anti-von Willebrand Factor (vWF) antibodies.

64. The device of claim 51 wherein the cell isolation device is coated with a hydrophobic agent.

65. The device of claim 64 wherein the hydrophobic agent is selected from the group consisting of teflon, perfluoronated plastic, polyethylene glycol, ethylene oxide-terminated trichlorosilane, and hydrophobic alkyltrichlorosilane.

66. The device of claim 51 wherein the cell isolation device is coated with an anti-coagulant.

67. The device of claim 66 wherein the anti-coagulant is selected from the group consisting of heparin, heparin fragments, tissue-type plasminogen activator (tPA), urokinase (uPA), Hirudan, albumin, anti-platelet receptor GPIB antibodies, anti-platelet receptor GPIIb/IIIa antibodies, and anti-von Willebrand Factor (vWF) antibodies.

68. The device of claim 38, wherein the cells associated with magnetic material comprise magnetic beads.

69. The device of claim 38 wherein the cells associated with magnetic material comprise a bioaffinity ligand.

70. The device of claim 69 wherein the bioaffinity ligand is an antibody.

71. The device of claim 70 wherein the antibody is specific for syndecan.

72. The device of claim 38 wherein the cells associated with magnetic material are hybridoma cells.

73. A method of arraying cells on a substrate in a discrete pattern comprising;
    1. Obtaining a cell-containing solution comprising cells associated with magnetic material;
    2. delivering said cells associated with magnetic material to a substrate having magnetic receptacles disposed in the discrete pattern thereon; and
    3. washing said substrate with a cell-free solution,
    wherein each of said magnetic receptacle traps from about one to about five of said cells associated with magnetic material on the substrate.

74. The method of claim 73 wherein said cells are hybridoma cells.

75. The method of claim 73 wherein the discrete pattern matches that of a 96-well microtiter plate.

76. The method of claim 73 wherein the discrete pattern matches that of a 384-well microtiter plate.

77. The method of claim 73 wherein the discrete pattern matches that of a 1536-well microtiter plate.

78. The method of claim 73 further comprising a cell delivery device comprising a fluidic interface having at least one channel having an inlet and outlet port.

79. The method of claim 78, wherein the fluidic interface has a plurality of channels.

80. The method of claim 79 wherein the at least one channel has a diameter of about 100μm.

81. The method of claim 73 further comprising a cell panning device.

82. The method of claim 73 wherein the substrate is fabricated from materials selected from the group consisting of glass, urethane, rubber, molded plastic, polymethylmethacrylate, polycarbonate, polytetrafluoroethylene, polyvinylchloride, polydimethylsiloxane, and polysulfone.

83. The method of claim 73 wherein the magnetic receptacle comprises a permanent magnet and a localized magnetic field gradient.

84. The method of claim 83 wherein the permanent magnet is in the form of filings.

85. The method of claim 83 wherein the permanent magnet is in the form of horns.

86. The method of claim 83 wherein the permanent magnet comprises a rare earth metal.

87. The method of claim 86 wherein the rare earth metal is neodymium.

88. The method of claim 83 wherein the permanent magnet is positioned above, below or coplanar with the substrate.

89. The method of claim 83 wherein the localized magnetic field gradient strength is capable of capturing between one to five cells associated with magnetic material per said magnetic receptacle.

90. The method of claim 73 wherein the magnetic receptacle comprises a highly-magnetically-permeable material and a localized magnetic field gradient derived from an external magnetic field.

91. The method of claim 90 wherein the highly-magnetically-permeable material is in the

form of filings.

92. The method of claim 90 wherein the highly-magnetically- permeable material is in the form of horns.

93. The method of claim 90 wherein the highly-magnetically-permeable material comprises nickel, cobalt, soft iron, silicon iron, gadolinium, or a combination thereof.

94. The method of claim 90 wherein the highly-magnetically-permeable material is positioned above, below or coplanar with the substrate.

95. The method of claim 90 wherein the localized magnetic field gradient has a strength capable of capturing about one to about five cells associated with magnetic material per magnetic receptacle.

96. The method of claim 90 wherein the external magnetic field is derived from permanent magnet.

97. The method of claim 96 wherein the permanent magnet comprises neodymium iron boron.

98. The method of claim 90 wherein the external magnetic field is derived from an electromagnet.

99. The method of claim 73 further comprising placing a layer on top of said substrate wherein said layer has micro-gaps positioned over said magnetic receptacles.

100. The method of claim 73 further comprising the step of isolating said cells associated with magnetic material using a cell isolation device.

101. The method of claim 100, wherein the wells of the cell isolation device have micro through-holes and micro through-hole walls.

102. The method of claim 101, wherein the micro through-holes comprise a semi-permeable membrane opposite the substrate, wherein the membrane restricts cell movement between wells and is permeable to fluid.

103. The method of claim 101 wherein the micro through-hole walls are canted or perpendicular to the substrate.

104. The method of claim 73 wherein the cell isolation device is mated to said substrate such that when the substrate is removed, the cells associated with magnetic material remain in the cell isolation device.

105. The method of claim 104, where the cells associated with magnetic material are transferred to the cell isolation device by centrifugal force.

106. The method of claim 73 wherein the cells associated with magnetic material comprise magnetic beads.

107. The method of claim 73 wherein the cells associated with magnetic material comprise a bioaffinity ligand.

108. The method of claim 107 wherein the bioaffinity ligand is an antibody.

109. The method of claim 108 wherein the antibody is specific for syndecan.

110. The method of claim 73 wherein the cells associated with magnetic material are hybridoma cells.

111. The method of claim 73 wherein the cells associated with magnetic material are inherently magnetic.

112. A device for immobilizing cells associated with magnetic material in a cell-containing fluid comprising a substrate having a one or more magnetic receptacle(s), an external magnetic field and a cell delivery device; wherein the magnetic receptacle(s) comprise highly-magnetically-permeable material and a localized magnetic field gradient.

113. The device of claim 112 wherein the substrate and cell delivery device are fabricated from a material selected from the group consisting of glass, urethane, rubber, molded plastic, polymethylmethacrylate, polycarbonate, polytetrafluoroethylene, polyvinylchloride, polydimethylsiloxane, and polysulfone

114. The device of claim 112 wherein the highly-magnetically-permeable material is in the form of filings.

115. The device of claim 112 wherein the highly-magnetically- permeable material is in the form of horns.

116. The device of claim 112 wherein the highly-magnetically-permeable material comprises nickel, cobalt, soft iron, silicon iron, gadolinium, or a combination thereof.

117. The device of claim 112 wherein the highly-magnetically-permeable material is positioned above, below or coplanar with the substrate.

118. The device of claim 112 wherein the localized magnetic field gradient has a strength capable of capturing about one to about five cells associated with magnetic material per magnetic receptacle.

119. The device of claim 112 wherein the external magnetic field is derived from a permanent magnet.

120. The device of claim 119 wherein the permanent magnet comprises neodymium.

121. The device of claim 112 wherein the external magnetic fields is derived from an electromagnet.

122. The device of claim 112 further comprising a layer placed on top of said substrate wherein said layer has a micro-gap positioned over each said magnetic receptacle(s).

123. The device of claim 112 wherein the cell delivery device comprises a fluidic interface having at least one channel having an inlet and outlet port.

124. The device of claim 123 having a plurality of channels.

125. The device of claim 123 wherein the at least one channel has a diameter of about 100μm.

126. The device of claim 112 wherein the cell delivery device comprises a cell panning device.

127. The device of claim 112 further comprising a cell isolation device comprising on or more well(s) which are positioned over said magnetic receptacle(s).

128. The device of claim 127, wherein the wells of the cell isolation device has a micro through-hole and a micro through-hole walls.

129. The device of claim 128, wherein the micro through-holes comprise a semi-permeable membrane opposite the substrate, wherein the membrane restricts cell movement between wells and is permeable to fluid.

130. The device of claim 128 wherein the micro through-hole walls are canted or perpendicular to the substrate.

131. The device of claim 127 wherein the cell isolation device is mated to said substrate such that when the substrate is removed, the cells associated with magnetic material remain in the cell isolation device.

132. The device of claim 131, where the cells associated with magnetic material are transferred to the cell isolation device by centrifugal force.

133. The device of claim 112 wherein the substrate and the cell delivery device are coated with a hydrophobic agent.

134. The device of claim 133 wherein the hydrophobic agent is selected from the group consisting of teflon, perfluoronated plastic, polyethylene glycol, ethylene oxide-terminated trichlorosilane, and hydrophobic alkyltrichlorosilane.

135. The device of claim 112 wherein the substrate and the cell delivery device are coated with an anti-coagulant.

136. The device of claim 135 wherein the anti-coagulant is selected from the group consisting of heparin, heparin fragments, tissue-type plasminogen activator (tPA), urokinase (uPA), Hirudan, albumin, anti-platelet receptor GPIB antibodies, anti-platelet receptor GPIIb/IIIa antibodies, and anti-von Willebrand Factor (vWF) antibodies.

137. The device of claim 112, wherein the cells associated with magnetic material comprise magnetic beads.

138. The device of claim 112 wherein the cells associated with magnetic material comprise a bioaffinity ligand.

139. The device of claim 138 wherein the bioaffinity ligand is an antibody.

140. The device of claim 139 wherein the antibody is specific for syndecan.

141. The device of claim 112 wherein the cells associated with magnetic material are hybridoma cells.

142. The device of claim 127 wherein the cell isolation device is coated with a hydrophobic agent.

143. The device of claim 142 wherein the hydrophobic agent is selected from the group consisting of teflon, perfluoronated plastic, polyethylene glycol, ethylene oxide-terminated trichlorosilane, and hydrophobic alkyltrichlorosilane.

144. The device of claim 127 wherein the cell isolation device is coated with an anti-coagulant.

145. The device of claim 144 wherein the anti-coagulant is selected from the group consisting of heparin, heparin fragments, tissue-type plasminogen activator (tPA), urokinase (uPA), Hirudan, albumin, anti-platelet receptor GPIB antibodies, anti-platelet receptor GPIIb/IIIa antibodies, and anti-von Willebrand Factor (vWF) antibodies.

146. A device for immobilizing cells associated with magnetic material in a cell-containing fluid comprising a substrate having one or more magnetic receptacle(s); wherein the magnetic receptacle(s) comprises a permanent magnet and a localized magnetic field gradient.

147. The device of claim 146 wherein the substrate is fabricated from a material selected from the group consisting of glass, urethane, rubber, molded plastic, polymethylmethacrylate, polycarbonate, polytetrafluoroethylene, polyvinylchloride, polydimethylsiloxane, and polysulfone.

148. The device of claim 147 wherein the permanent magnet is in the form of filings.

148. The device of claim 146 wherein the permanent magnet is in the form of horns.

150. The device of claim 146 wherein the permanent magnet comprises a rare earth metal.

151. The device of claim 151 wherein the rare earth metal is neodymium.

152. The device of claim 146 wherein the permanent magnet is positioned above, below or coplanar with the substrate.

153. The device of claim 146 wherein the localized magnetic field gradient strength is capable of capturing between one to five cells associated with magnetic material per

said magnetic receptacle.

154. The device of claim 146 further comprising a layer placed on top of said substrate wherein said layer has a micro-gap positioned over each said magnetic receptacle(s).

155. The device of claim 146 further comprising a cell delivery device comprising a fluidic interface having at least one channel having an inlet and outlet port.

156. The device of claim 155 having a plurality of channels.

157. The device of claim 155 wherein the at least one channel has a diameter of about 100μm.

158. The device of claim 146 further comprising a cell panning device.

159. The device of claim 146 further comprising a cell isolation device comprising one or more well(s) which are positioned over said magnetic receptacle(s).

160. The device of claim 159, wherein each of the well(s) of the cell isolation device has a micro through-hole and micro through-hole walls.

161. The device of claim 160, wherein the micro through-hole comprises a semi-permeable membrane opposite the substrate, wherein said membrane restricts cell movement between wells and is permeable to fluid.

162. The device of claim 161 wherein the micro through-hole walls are canted or perpendicular to the substrate.

163. The device of claim 161 wherein the cell isolation device is mated to said substrate such that when the substrate is removed, the cells associated with magnetic material remain in the cell isolation device.

164. The device of claim 163, where the cells associated with magnetic material are transferred to the cell isolation device by centrifugal force.

165. The device of claim 146 wherein the substrate is coated with a hydrophobic agent.

166. The device of claim 165 wherein the hydrophobic agent is selected from the group consisting of teflon, perfluoronated plastic, polyethylene glycol, ethylene oxide-terminated trichlorosilane, hydrophobic alkyltrichlorosilane.

167. The device of claim 168 wherein the substrate is coated with an anti-coagulant.

168. The device of claim 167 wherein the anti-coagulant is selected from the group consisting of heparin, heparin fragments, tissue-type plasminogen activator (tPA), urokinase (uPA), Hirudan, albumin, anti-platelet receptor GPIB antibodies, anti-platelet receptor GPIIb/IIIa antibodies, and anti-von Willebrand Factor (vWF) antibodies.

169. The device of claim 159 wherein the cell isolation device is coated with a

hydrophobic agent.

170. The device of claim 169 wherein the hydrophobic agent is selected from the group consisting of teflon, perfluoronated plastic, polyethylene glycol, ethylene oxide-terminated trichlorosilane, and hydrophobic alkyltrichlorosilane.

171. The device of claim 159 wherein the cell isolation device is coated with an anti-coagulant.

172. The device of claim 171 wherein the anti-coagulant is selected from the group consisting of heparin, heparin fragments, tissue-type plasminogen activator (tPA), urokinase (uPA), Hirudan, albumin, anti-platelet receptor GPIB antibodies, anti-platelet receptor GPIIb/IIIa antibodies, and anti-von Willebrand Factor (vWF) antibodies.

173. The device of claim 146, wherein the cells associated with magnetic material comprise magnetic beads.

174. The device of claim 146 wherein the cells associated with magnetic material comprise a bioaffinity ligand.

175. The device of claim 174 wherein the bioaffinity ligand is an antibody.

176. The device of claim 175 wherein the antibody is specific for syndecan.

177. The device of claim 146 wherein the cells associated with magnetic material are hybridoma cells.

178. The device of any of claims 1, 38, 112, or 146 wherein the cells associated with magnetic material are inherently magnetic.

179. A method arraying about one to about five cells into a discrete location for further experimentation comprising:

a. associating said cells with magnetic beads to yield magnetically associated cells using a bioaffinity ligand;
b. delivering said magnetically associated cells to a substrate having magnetic receptacles, comprising a localized magnetic field gradient, disposed in a two-dimensional array thereon such that about one to about five said magnetically associated cells are immobilized in each of said having magnetic receptacles.

180. The method of claim 179 wherein, said further experimentation comprises any combination of cell transfection, cell injection, *in vitro* fertilization, hybridoma screening, patch-clamp experiments, or single cell PCR.

181. The method of claim 179 wherein said cells are hybridoma cells.

182. The method of claim 179 wherein the substrate is fabricated from a material selected from the group consisting of glass, urethane, rubber, molded plastic, polymethylmethacrylate, polycarbonate, polytetrafluoroethylene, polyvinylchloride,

polydimethylsiloxane, and polysulfone.

183. The method of claim 179 wherein said bioaffinity ligand is an antibody.

184. The method of claim 179 further comprising the step of placing a layer on top of said substrate wherein said layer has micro-gaps positioned over said magnetic receptacles prior to step (b).

185. The method of claim 179 further comprising the step of isolating said cells using a cell isolation device.

186. The method of claim 185, wherein the wells of the cell isolation device have micro through-holes and micro through-hole walls.

187. The method of claim 186, wherein the micro through-holes comprise a semi-permeable membrane opposite the substrate, wherein the membrane restricts cell movement between wells and is permeable to fluid.

188. The method of claim 187 wherein the micro through-hole walls are canted or perpendicular to the substrate.

189. The method of claim 179 wherein the cell isolation device is mated to said substrate such that when the substrate is removed, the cells remain in the cell isolation device.

190. The method of claim 189, where the cells associated with magnetic material are transferred to the cell isolation device by centrifugal force.

191. The method of claim 179 wherein the substrate is coated with a hydrophobic agent.

192. The method of claim 191 wherein the hydrophobic agent is selected from the group consisting of teflon, perfluoronated plastic, polyethylene glycol, ethylene oxide-terminated trichlorosilane, and hydrophobic alkyltrichlorosilane.

193. The method of claim 179 wherein the substrate is coated with an anti-coagulant.

194. The method of claim 193 wherein the anti-coagulant is selected from the group consisting of heparin, heparin fragments, tissue-type plasminogen activator (tPA), urokinase (uPA), Hirudan, albumin, anti-platelet receptor GPIB antibodies, anti-platelet receptor GPIIb/IIIa antibodies, and anti-von Willebrand Factor (vWF) antibodies.

195. The method of claim 179 wherein the magnetic receptacle comprises a permanent magnet.

196. The method of claim 179 wherein the magnetic receptacle comprises a highly permeable magnetic material.

197. A device for arraying about one to about five cells into a discrete location for further experimentation comprising a substrate having magnetic receptacles, comprising a localized magnetic field gradient, disposed in a two-dimensional array thereon such

that about one to about five cells associated with magnetic beads are immobilized in each of said magnetic receptacles.

198. The device of claim 197 wherein, said further experimentation comprises any combination of cell transfection, cell injection, in vitro fertilization, hybridoma screening, patch-clamp experiments, or single cell PCR.

199. The device of claim 197 wherein said cells are hybridoma cells.

200. The device of claim 197 wherein the substrate is fabricated from a material selected from the group consisting of glass, urethane, rubber, molded plastic, polymethylmethacrylate, polycarbonate, polytetrafluoroethylene, polyvinylchloride, polydimethylsiloxane, and polysulfone.

201. The device of claim 197 wherein said bioaffinity ligand is an antibody.

202. The device of claim 197 further a layer on top of said substrate wherein said layer has micro-gaps positioned over said magnetic receptacles.

203. The device of claim 197 further comprising the a cell isolation device.

204. The device of claim 203, wherein the wells of the cell isolation device have micro through-holes and micro through-hole walls.

205. The device of claim 204, wherein the micro through-holes comprise a semi-permeable membrane opposite the substrate, wherein the membrane restricts cell movement between wells and is permeable to fluid.

206. The device of claim 205 wherein the micro through-hole walls are canted or perpendicular to the substrate.

207. The device of claim 203 wherein the cell isolation device is mated to said substrate such that when the substrate is removed, the cells remain in the cell isolation device.

208. The device of claim 207, where the cells associated with magnetic material are transferred to the cell isolation device by centrifugal force.

209. The device of claim 197 wherein the substrate is coated with a hydrophobic agent.

210. The device of claim 209 wherein the hydrophobic agent is selected from the group consisting of teflon, perfluoronated plastic, polyethylene glycol, ethylene oxide-terminated trichlorosilane, and hydrophobic alkyltrichlorosilane.

211. The device of claim 197 wherein the substrate is coated with an anti-coagulant.

212. The device of claim 211 wherein the anti-coagulant is selected from the group consisting of heparin, heparin fragments, tissue-type plasminogen activator (tPA), urokinase (uPA), Hirudan, albumin, anti-platelet receptor GPIB antibodies, anti-platelet receptor GPIIb/IIIa antibodies, and anti-von Willebrand Factor (vWF) antibodies.

213. The device of claim 197 wherein the magnetic receptacle comprises a permanent magnet.

214. The device of claim 197 wherein the magnetic receptacle comprises a highly permeable magnetic material.